

What is claimed is:

1. A process for cultivating *Morchella* ascocarps using mycelium and a tree seedling, the tree seedling having a root system and a shoot system, the process comprising the steps of:

inoculating the root system with the mycelium to produce an inoculated tree seedling;

stimulating the mycelium to form sclerotia; and

inducing said sclerotia to produce ascocarps.

2. The process of claim 1 further comprising the step of cultivating the mycelium by the steps of:

introducing spores onto a culture medium; and

incubating said spores until said spores produce the mycelium.

3. The process of claim 2 wherein said step of inoculating the root system with the mycelium comprises:

introducing the root system of said tree seedling into said culture medium;
and

incubating said culture medium until the mycelium has inoculated the root system.

4. The process of claim 2 wherein said step of inoculating the root system with the mycelium comprises:

adding a planting medium on top of said culture medium;

placing at least one tree seed on top of said planting medium;

germinating said tree seed into the tree seedling; and

growing the tree seedling until the root system is inoculated with the mycelium.

5. The process of claim 1 further comprising the step of cultivating mycelium by the steps of:

introducing a plurality of spores into a container of culture medium;

placing said container of culture medium in a planting medium;

covering said culture medium and said planting medium with a germinating medium; and

incubating said spores until said spores produce the mycelium.

6. The process of claim 5 wherein the step of inoculating the root system with the mycelium comprises:

placing at least one tree seed in said germinating medium;

germinating said tree seed into the tree seedling; and

growing the tree seedling until the root system is inoculated with the mycelium.

7. The process of claim 1 wherein said step of inoculating the root system comprises:

introducing spores onto a culture medium;

introducing a tree seed into a planting medium;

simultaneously incubating the spores and the tree seed until said spores produce the mycelium and the tree seed germinates into the tree seedling;

placing the tree seedling on the culture medium; and

incubating the culture medium until the mycelium has inoculated the root system.

8. The process of claim 1 wherein said step of inoculating the root system with the mycelium comprises injecting the mycelium into the tree seedling.
9. The process of claim 1 wherein said step of inoculating the root system with the mycelium comprises grafting a portion of an inoculated tree seedling onto the tree seedling.
10. The process of claim 1 wherein said step of inoculating the root system with the mycelium comprises growing the tree seedling in close proximity to an inoculated tree.
11. The process of claim 1 wherein the tree seedling is an elm tree seedling.
12. The process of claim 1 wherein the tree seedling is an ash tree seedling.
13. The process of claim 1 wherein the tree seedling is an apple tree seedling.
14. The process of claim 1 wherein the tree seedling is an oak tree seedling.
15. The process of claim 1 wherein the tree seedling is a cherry tree seedling.
16. The process of claim 1 wherein the tree seedling is a peach tree seedling.
17. The process of claim 1 further comprising the step of planting said inoculated tree seedling into the ground.
18. The process of claim 1 further comprising the step of planting said inoculated tree seedling into containers.

19. The process of claim 1 further comprising the step of growing said inoculated tree seedling for at least one growing season.
20. The process of claim 18 further comprising the step of growing said inoculated tree seedling in said containers in a climate controlled environment.
21. The process of claim 20 where in said climate controlled environment includes the simulation of at least one growing season.
22. The process of claim 1 wherein said step of stimulating the mycelium to form sclerotia comprises distressing said inoculated tree seedling.
23. The process of claim 22 wherein said distressing said inoculated tree seedling comprises severing the shoot system from the root system.
24. The process of claim 22 wherein said distressing said inoculated tree seedling comprises defoliating the tree.
25. The process of claim 22 wherein said shoot system of the tree seedling comprises leaves and said distressing said inoculated tree seedling comprises smothering the leaves.
26. The process of claim 1 where in said step of stimulating the mycelium to form sclerotia further comprises allowing sclerotia to develop for at least one growing season after the severing of said shoot system.
27. The process of claim 1 wherein said step of inducing said sclerotia to produce ascocarps comprises providing conditions conducive to the formation of ascocarps.
28. The process of claim 27 wherein one of said conditions comprises temperatures in the range of about 18.3°C (65° F) to about 29.4°C (85° F).

29. The process of claim 27 wherein one of said conditions comprises providing sufficient water.

30. A process for accelerating the growth of trees using mycelium, the tree having a root system, the process comprising the steps of:
inoculating the root system with the mycelium.

31. The process of claim 30 further comprising the step of cultivating the mycelium by the steps of:
introducing spores onto a culture medium; and
incubating said spores until said spores produce the mycelium.

32. The process of claim 31 wherein said step of inoculating the root system with the mycelium comprises:
introducing the root system of the tree into said culture medium; and
incubating said culture medium until the mycelium has inoculated the root system.

33. The process of claim 31 wherein said step of inoculating the root system with the mycelium comprises:
adding a planting medium on top of said culture medium;
placing at least one tree seed in said planting medium;
germinating said tree seed into a tree; and
growing said tree until the root system is inoculated with the mycelium.

34. The process of claim 30 further comprising the step of cultivating the mycelium by the steps of:
introducing a plurality of spores into a container of culture medium;

placing said container of culture medium in a planting medium;
covering said culture medium and said planting medium with a
germinating medium; and
incubating said spores until the mycelium is created.

35. The process of claim 34 wherein the step inoculating the root system with the mycelium comprises:

placing at least one tree seed on top of said germinating medium;
germinating said tree seed into the tree; and
growing the tree until the root system is inoculated with the mycelium.

36. The process of claim 30 wherein the step inoculating the root system comprises:

introducing spores onto a culture medium;
introducing a tree seed into a planting medium;
simultaneously incubating said spores and said tree seed until said spores develop the mycelium and the tree seed germinates into a tree;
placing said tree on the culture medium; and
incubating the culture medium until the mycelium has inoculated the root system.

37. The process of claim 30 wherein said step of inoculating the root system with the mycelium comprises injecting the mycelium into the tree seedling.

38. The process of claim 30 wherein said step of inoculating the root system with the mycelium comprises grafting a portion of an inoculated tree seedling onto the tree seedling.

39. The process of claim 30 wherein said step of inoculating the root system with the mycelium comprises growing the tree seedling in close proximity to an inoculated tree.
40. The process of claim 30 wherein the tree is an apple tree.
41. The process of claim 30 wherein the tree is an ash tree.
42. The process of claim 30 wherein the tree is an elm tree.
43. The process of claim 30 wherein the tree is an oak tree seedling.
44. The process of claim 30 wherein the tree is a cherry tree seedling.
45. The process of claim 30 wherein the tree is a peach tree seedling.
46. The process of claim 33 further comprising the step of planting said inoculated tree into the ground.
47. The process of claim 33 further comprising the step of planting said inoculated tree into pots.
48. A process for cultivating *Morchella sclerotia* using mycelium and a tree seedling, the tree seedling having a root system and a shoot system, the process comprising the steps of:
- inoculating the root system with the mycelium to produce an inoculated tree seedling; and
 - stimulating the mycelium to form sclerotia.
49. The process of claim 48 further comprising the step of cultivating the mycelium by the steps of:
- introducing spores onto a culture medium; and

incubating said spores until said spores produce the mycelium.

50. The process of claim 49 wherein said step of inoculating the root system with the mycelium comprises:

introducing the root system of said tree seedling into said culture medium;
and
incubating said culture medium until the mycelium has inoculated the root system.

51. The process of claim 49 wherein said step of inoculating the root system with the mycelium comprises:

adding a planting medium on top of said culture medium;
placing at least one tree seed on top of said planting medium;
germinating said tree seed into the tree seedling; and
growing the tree seedling until the root system is inoculated with the mycelium.

52. The process of claim 48 further comprising the step of cultivating mycelium by the steps of:

introducing a plurality of spores into a container of culture medium;
placing said container of culture medium in a planting medium;
covering said culture medium and said planting medium with a germinating medium; and
incubating said spores until said spores produce the mycelium.

53. The process of claim 52 wherein the step of inoculating the root system with the mycelium comprises:

placing at least one tree seed in said germinating medium;
germinating said tree seed into the tree seedling; and
growing the tree seedling until the root system is inoculated with the mycelium.

54. The process of claim 48 wherein said step of inoculating the root system comprises:
- introducing spores onto a culture medium;
 - introducing a tree seed into a planting medium;
 - simultaneously incubating the spores and the tree seed until said spores produce the mycelium and the tree seed germinates into the tree seedling;
 - placing the tree seedling on the culture medium; and
 - incubating the culture medium until the mycelium has inoculated the root system.
55. The process of claim 48 wherein said step of inoculating the root system with the mycelium comprises injecting the mycelium into the tree seedling.
56. The process of claim 48 wherein said step of inoculating the root system with the mycelium comprises grafting a portion of an inoculated tree seedling onto the tree seedling.
57. The process of claim 48 wherein said step of inoculating the root system with the mycelium comprises growing the tree seedling in close proximity to an inoculated tree.
58. The process of claim 48 further comprising the step of growing said inoculated tree seedling for at least one growing season.
59. The process of claim 48 wherein said step of stimulating the mycelium to form sclerotia comprises distressing said inoculated tree seedling.
60. The process of claim 59 wherein said distressing said inoculated tree seedling comprises severing the shoot system from the root system.
61. The process of claim 59 wherein said distressing said inoculated tree seedling comprises defoliating the tree.

62. The process of claim 59 wherein said shoot system of the tree seedling comprises leaves and said distressing said inoculated tree seedling comprises smothering the leaves.

63. The process of claim 48 where in said step of stimulating the mycelium to form sclerotia further comprises allowing sclerotia to develop for at least one growing season after the severing of said shoot system.